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PROJECT NO. 52373

REVIEW OF WHOLESALE ELECTRIC MARKET DESIGN	§ § § §	**PUBLIC UTILITY COMMISSION OF TEXAS**

COMMENTS OF SOUTHERN POWER COMPANY

Southern Power Company ("SPC") respectfully submits these comments in response to the Public Utility Commission of Texas's ("Commission") request in Project No. 52373. SPC supports the adoption of an LSE Obligation that will provide proper economic signals for a diverse fleet of supply-side and demand-side technologies and better ensure long-term reliability outcomes in the Electric Reliability Council of Texas ("ERCOT") region.

I. COMMENTS ON ERCOT MARKET DESIGN

1. The ORDC is currently a "blended curve" based on prior Commission action. Should the ORDC be separated into separate seasonal curves again? How would this change affect operational and financial outcomes?

SPC recommends that the Commission maintain the current "blended curve". As evidenced by comments and testimony of various stakeholders, there are differing opinions on the appropriate parameters used in the ORDC curve. For example, the Value of Lost Load ("VOLL") changes based on time of year, customer type, and business function, and it would be difficult if not impossible to accurately model VOLL for all circumstances. SPC has concerns that attempting to change ORDC parameters, which are naturally uncertain, to account for seasonal variations would introduce additional complexity and may lead to arbitrary and flawed results. Additionally, to implement Real-Time Co-Optimization, ERCOT will disaggregate the single ORDC into individual Ancillary Service Demand Curves ("ASDCs"),[1] which would become increasingly complex to have multiple ASDCs for each season of the year. SPC believes that the "blended curve" strikes the appropriate balance between exact precision and simplicity.

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[1] See ERCOT's Key Principle 1.1, "Ancillary Service Demand Curves and Current Market Price Adders". http://www.ercot.com/mktrules/puctDirectives/kp1p1

2. **What modifications could be made to existing ancillary services to better reflect seasonal variability?**

SPC does not recommend any specific modifications to existing Ancillary Services, which should be viewed as a set of flexible tools that allow ERCOT to manage the real-time operational needs of the system. SPC encourages the Commission and ERCOT to set a recurring schedule, as directed by Senate Bill 3, to evaluate the existing suite of Ancillary Services and reform as necessary to adapt and ensure ongoing efficacy based on evolving system reliability needs and current market conditions.

3. **Should ERCOT develop a discrete fuel-specific reliability product for winter? If so, please describe the attributes of such a product, including procurement and verification processes.**

SPC supports a winter fuel reliability product, which would create an additional tool for ERCOT to manage real-time operational risks during winter-related events. While this product could be a new, discrete product, SPC recommends that a winter fuel reliability product be incorporated into the Emergency Response Service ("ERS") program. ERCOT would procure multiple ERS service tiers with increasing requirements, such as dual-fuel capability or onsite fuel storage, at separate clearing prices to compensate those resources who take actions to contribute higher levels of reliability. All resources that are technically capable of providing the desired services should qualify to participate. A major benefit of such an approach is to incorporate this additional reliability service into an existing program familiar to market participants. ERCOT would procure the new higher-tiered ERS product on the existing Standard Contract Terms schedule.[2] ERCOT should be given necessary audit authority to perform site inspections and evaluate compliance of specific resources. ERCOT could also require officer-level attestations, similar to the process for winter weatherization compliance.

   a. **How long would it take to develop such a product?** No comment
   b. **Could a similar fuel-based capability be captured by modifying existing ancillary services in the ERCOT market?**

[2] In contrast with a new Ancillary Service product procured on a day-ahead basis where market-clearing is more uncertain, participating resources would have certainty that they have been procured for those months and allow adeuqate time to make necessary preparations.

As discussed above, SPC recommends the Commission incorporate a winter fuel reliability product into the existing ERS program rather than create or modify a new or existing Ancillary Service.

4. **Are there alternatives to a load serving entity (LSE) Obligation that could be used to impose a firming requirement on all generation resources in ERCOT?**

SPC considers alternatives to an LSE Obligation to be inferior and short-sighted solutions, not providing the necessary reliability and not offering clear long-term economic signals to incent investment in existing and new generation resources. Additionally, imposing a firming requirement on all generation resources distorts the economics of existing investments and contractual agreements, will have a chilling effect on future investment, and introduces tremendous administrative complexity to verify compliance based on the unique physical characteristics of individual generation resources.

5. **Are there alternatives to an LSE Obligation that could address the concerns raised about the stakeholder proposals submitted to the Commission?** No comment
6. **How can an LSE Obligation be designed to protect against the abuse of market power in the wholesale and retail markets?**
    a. **Will an LSE Obligation negatively impact customer choice for consumers in the competitive retail electric market in ERCOT? Can protective measures be put in place to avoid a negative impact on customer choice? If so, please specify what measures.** No comment
    b. **How can market power be effectively monitored in a market where owners of power generation also own REPs that serve a large portion of ERCOT's retail customers?** No comment
    c. **What is the impact on self-supplying large industrial consumers who will have to comply with the LSE Obligation and will it impact their decision to site in Texas?** No comment
    d. **What is the impact of an LSE Obligation on load-serving entities that do not offer retail choice, such as municipally owned utilities or electric cooperatives?**

The reliability benefits of well-designed wholesale market improvements will reach all market participants, including municipally-owned utilities and electric cooperatives. Under an LSE obligation methodology, these Non-Opt-In Entities should have the option to satisfy their

load obligation either through self-supply, bilateral procurement from third parties, or procurement from ERCOT at a residual auction-clearing price. In this regard, the LSE Obligation would strongly resemble energy resource procurement by NOIEs generally.

e. Can market power be monitored in the bilateral market if an LSE Obligation is implemented in ERCOT? Can protective measures be put in place to ensure that market power is effectively monitored in ERCOT with an LSE Obligation? If so, please specify what measures.

Yes, market power can be monitored in the bilateral market if an LSE Obligation is implemented in ERCOT. Market power is effectively monitored, tested, and mitigated in Southeastern and Western bilateral electricity markets and such rules can be informative for the Commision's evaluation of monitoring mechanisms and possible mitigation options. Potential protective measures include confidential reporting of bilateral transaction prices to the Independent Market Monitor and scanning of market share ownership of installed generation capacity in the ERCOT region. To the extent that secondary markets, like the Intercontinental Exchange, trade products associated with the LSE Obligation, market monitoring should also include examination of these secondary markets. The market monitor in PJM and others include secondary exchanges in their analyses and this added scope appears beneficial.

f. Should the LSE Obligation include a "must offer" provision? If so, how should it be structured?

Yes, it is appropriate to include a "must offer" provision in the day-ahead market for capacity-accredited resources as part of an LSE Obligation. The day-ahead must-offer provision should apply to the minimum of a resource's accredited capacity value and forecasted electrical output to take into account known derates, outages, and fuel availability. Current day-ahead market timelines should apply. This must-offer provision in the day-ahead market will give ERCOT operators an additional layer of transparency when forecasting operational needs.

7. How should an LSE Obligation be accurately and fairly determined for each LSE? What is the appropriate segment of time for each obligation? (Months? Weeks? 24 hour operating day? 12 hour segments? Hourly?)

SPC recommends that the Commission adopt an LSE Obligation with a planning horizon of three years that would requires LSEs to provide information and increasingly secure sufficient supply-side and demand-side resources to satisfy their forecasted gross peak load plus a pre-

determined reserve margin for the winter and summer seasons. In practice, LSEs would submit rolling three-year resource plans providing ERCOT information on expected obligations and plans for meeting those obligations with a combination of supply and demand-side resources. The two-year and three-year forward annual resource plans would be informational only and have no associated penalties. The one-year forward plan would have a minimum target for the LSE to satisfy as a percentage of their forecasted obligation. On a month-ahead basis, LSEs could show increasing increments of satisfying their obligation. LSEs would have the flexibility to manage their month-ahead position through bilateral trading of Resource Adequacy Credits ("RACs").[3] As a last resort, ERCOT may procure RACs directly in a backstop auction and any short LSEs would be required to purchase their short position from ERCOT at an auction-clearing price. The Commission may consider a cap of RACs that can be procured in the backstop auction in order to avoid overburdening the process. This approach provides maximum flexibility for ERCOT's retail market structure, allowing Retail Electric Providers to enter, exit, and manage obligations in the closest possible proximity to the operating month.

Effective Load Carrying Capability ("ELCC"), which ERCOT already uses for annual market equilibrium and reserve margin studies, is a commonly accepted industry practice that is widely understood, would be straightforward to administer, and provide fair accreditation to all resource types. ELCC calculates the amount of incremental load a resource is expected to reliably serve, while considering probabilistic parameters of unserved load caused by unforced outages, load uncertainty, intermittency of renewable energy production, and the interactive effects between all resources. Importantly, ELCC is studied on an hourly basis to estimate all resources' expected reliability contribution and thus provides detailed granularity across different operational events throughout a year. Matching the precision of ELCC with the simplicity of a monthly LSE Obligation strikes the right balance.

8. **Can the reliability needs of the system be effectively determined with an LSE Obligation? How should objective standards around the value of the reliability-providing assets be set on an on-going basis?**

[3] A RAC would represent one MW of qualified capacity and could be used by LSEs to satisfy their obligation requirement. An added benefit is the similarity of RACs to Renewable Energy Credits ("RECs"), which are already familiar to ERCOT and market participants.

Yes. Implementing a well-designed monthly LSE Obligation that incorporates appropriate reserve margin targets (including differentiated summer and winter targets) across a sufficient planning horizon (minimum of three years) will create an effective mechanism for determining the reliability needs of the system.

a. Are there methods of accreditation that can be implemented less administrative burden or need for oversight, while still allowing for all resources to be properly accredited?

Yes. As discussed above, ELCC is a commonly accepted industry practice that is widely understood, would be straightforward to administer, and provide fair accreditation to all resource types.

b. How can winter weather standards be integrated into the accreditation system?

SPC recommends the Commission implement an LSE Obligation with separate parameters for summer and winter to mitigate the unique supply and demand risks of each peak season. This should include different target reserve margins and different capacity accreditations based on seasonal capabilities of generation, storage, and demand response resources. Additionally, a complimentary winter reliability product as discussed above provides an extra layer of insurance and an opportunity to enforce winter weather standards on a smaller subset of resources.

9. How can the LSE Obligation be designed to ensure demand response resources can participate fully and at all points in time?

Demand response resources should be accredited using the ELCC methodology like all other resources and should have similar obligations as supply-side resources to ensure non-discriminatory treatment and operational transparency.

10. How will an LSE Obligation incent investment in existing and new dispatchable generation?

SPC believes the LSE Obligation should be enforced every year (or season) and not require a trigger mechanism. This year-to-year certainty and continuity will incentivize LSEs to plan for resource adequacy compliance over a sufficient time horizon to design and have the flexibility to secure (either through self-supply or contracting) the desired portfolio of resources to meet their corporate objectives and satisfy customer preferences. The ELCC process will accredit a higher percent of nameplate capacity for dispatchable generation vis-a-vis alternatives. That, coupled with complimentary changes to energy and Ancillary Services markets and the introduction of a

winter reliability product will create the combined economic signals to incent investment in existing and new dispatchable generation.

11. How will an LSE Obligation help ERCOT ensure operational reliability in the real-time market (e.g., during cold weather events or periods of time with higher than expected electricity demand and/or lower than expected generation output of all types)?

SPC does not envision the LSE Obligation as a quick-fix solution, or necessarily even as a tool aligned with short-term objectives such as real-time operational reliability. A well-designed energy market, comprehensive access and transparency of operating data , and a suite of Ancillary Services that are continuously evaluated and adapted to the changing market are the appropriate tools to equip operators for ensuring real-time reliability. However, over the long term, the LSE Obligation will enforce planning practices and drive investments across a diverse range of supply and demand-side resources that will ensure market stability and enduring reliability.

12. What mechanism will ensure those receiving revenue streams for the reliability services perform adequately?

The wholesale capacity markets utilize a performance obligation that penalizes or rewards participating resources for underperformance or overperformance during extreme grid-shortage conditions. Under the LSE Obligation, LSEs must show sufficient resources to satisfy their obligation or bear the risk of an auction-clearing price in the backstop procurement auction. SPC expects that LSEs would include significant non-performance damages in their bilateral contracts with generation, storage, and demand response resources.

13. What is the estimated market and consumer cost impact if an LSE obligation is implemented in ERCOT? Describe the methodology used to reach the dollar amount.

SPC cannot estimate a specific dollar impact with certainty at this time. SPC urges the Commission to engage a qualified consultant to evaluate expected impacts for a range of LSE Obligation methodologies that the Commission is considering. Ultimately, the Commission must determine an appropriate balance between incrementally higher but less volatile consumer costs and the realized value of a more reliable electric grid.

14. How long will the LSE Obligation plan take to implement?

SPC suggests that an LSE Obligation could be implemented in two to three years, but defers to ERCOT on an expected timeline to define details of a methodology and then complete the necessary work to implement.

15. **If the Commission adopts an LSE Obligation, what assurances are necessary to ensure transparency and promote stability within retail and wholesale electric markets?** No comment

16. **Are there relevant "lessons learned" from the implementation of an LSE Obligation in the SPP, CAL-ISO, MISO, and Australian markets that could be applied in ERCOT?**

MISO's resource adequacy construct provides an example of a well-designed LSE Obligation that can be informative as the Commission evaluates design options. MISO LSEs can procure capacity to meet their load obligations either through bilateral contracts, self-supply, or the Planning Resource Auction ("PRA"). The PRA is a backstop procurement mechanism that allows MISO to procure needed capacity on behalf of capacity-short LSEs at an auction-clearing price. The result is that MISO LSEs have flexibility to choose their desired resource mix through a portfolio of short-term, intermediate-term, and long-term power supplies. Additionally, MISO has an economically efficient tool to procure needed resources on a competitive basis when a reliability risk (i.e., forecasted insufficient resources) is identified. While this process likely will involve Qualified Scheduling Entities ("QSEs") instead of LSEs under the ERCOT market design, SPC recommends the use of a similar construct for the LSE Obligation being considered by the Commission.

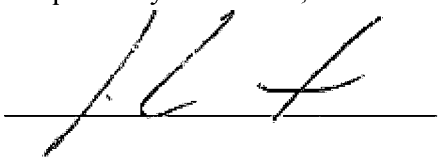
III. CONCLUSION

SPC appreciates the opportunity to provide comments for the Commission's consideration in its review of wholesale electric market design. It is crucial that the Commission create a market design that maintains regulatory stability and financial certainty and promotes long-term resource adequacy. SPC believes that the proposed LSE Obligation is the best option to assure long-term reliability outcomes and incentivize investment in all resource types. Similar to the Commission's efforts evaluating potential ORDC reform impacts , it is appropriate for the Commission to engage a qualified consultant to model potential reliability and financial impacts for a range of LSE Obligation methodologies before finalizing a solution. SPC commends the Commission's work thus far and believes the ongoing changes to weatherization requirements, ORDC reform, and potential changes to Ancillary Services will improve the overall reliability of the ERCOT region. It is important to properly evaluate various design elements so that the Commission can make an

informed decision on the best LSE Obligation design for Texas. SPC is open to discuss these comments, as well as previously filed comments, with the Commission.

Dated: November 1, 2021

Respectfully submitted,



John L. Pemberton,
Senior Vice President, General Counsel &
Chief Compliance Officer
Southern Power Company
30 Ivan Allen Blvd, NW
Atlanta, GA 30308

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EXECUTIVE SUMMARY
COMMENTS OF SOUTHERN POWER COMPANY

As requested by the Commission Staff, SPC submits this executive summary of its comments in bullet point form. SPC recommends that the Commission:

- Maintain a "blended" ORDC curve that strikes the right balance between exact precision and simplicity.
- Set a recurring schedule to comprehensively evaluate and, as needed, reform the existing suite of Ancillary Services based on evolving needs.
    - Ancillary Services should be viewed as a set of flexible tools that allow ERCOT to manage the real-time operational and reliability needs of the system.
    - Load is the ultimate beneficiary that drives the need for Ancillary Services and thus should continue to be assigned all Ancillary Services costs. Should the Commission revisit this issue, it should conduct a robust stakeholder process that reviews if such changes would enhance reliability and assesses benefits obtained and costs caused by all market participants to adhere to Senate Bill 3's non-discriminatory directive.
- Continue evaluating a winter fuel reliability service to give ERCOT an additional tool to manage real-time operational risks unique to winter-related events. SPC recommends incorporating this service into the existing ERS program.
- Adopt a mandatory LSE Obligation that will enforce planning practices and drive investments across a diverse range of supply and demand-side resources, ensuring market stability and enduring reliability.
    - SPC recommends a market re-design requiring each LSE to procure sufficient resources to serve its forecasted gross peak load plus a reserve margin over a sufficient planning horizon, and creating a residual auction that would allow

ERCOT to procure additional capacity as needed. This proposal is based conceptually on Option 4 recommended in the 2012 Brattle Group report on resource adequacy.[4]

- Engage a qualified consultant to study potential reliability and financial impacts for a range of LSE Obligation methodologies. It is important to evaluate and vet various design elements through analysis and stakeholder comments.
- Reject a generator firming standard that would distort the economics of existing investments and contractual agreements, create a chilling effect on future investment, and introduce tremendous complexity to administer.

[4] The Brattle Group, "ERCOT Investment Incentives and Resource Adequacy Report", filed on June 1, 2012, by ERCOT in Project No. 40268.